

**Tower Standard Technical Group Discussion  
DRAFT Notes from June 3, 2016 Call**

**Attendees:**    **Bob Egan, EPA**  
                      **Dave Larsen, REI**

**Kristen Hanson, LdF TNR**  
**Chris Saari and David Swimm, WDNR**

Larsen informed the group that REI has rolled out the cloud-based calendar and it is available for review/comment.

Larsen spoke with Matrix (drilling company) regarding use of the membrane interface probe (MIP), and it sounds like this could be a good tool to use at this site. Saari reported a similar contact with Cascade (drilling company); a MIP/cone penetrometer (CPT) combination would likely not work due the need to install the CPT with a smooth push rather than being hammered in with a Geoprobe. However, a MIP/hydraulic profiling tool (HPT) combination would be a feasible option, could provide real-time contaminant data along with qualitative lithologic and hydrostratigraphic information.

Swimm asked if the MIP could be “swamped” by presence of free product. No one was sure of this answer. Larsen asked if the plan was to use the probe to define the edges of the plume, and therefore less likely to contact free product. Saari thought probe would be used to define the edges of the plume, but also to locate the plume core and determine preferential flow paths. Egan agreed, and added that through post-processing of data, we could display plume dimensions in 3-D (for remedial planning, public participation, etc.).

Matrix feels that the probe can be pounded into a rocky substrate. The probe’s relatively small diameter (2”) should allow it to move between rocks as needed. Egan said he spoke with a lab guy at EPA, this person thought MIP/HPT would be a good tool to use here as well. This person cautioned about potentially slower drilling at depth, and the need to plan for contingency time (moving to new locations due to refusal, etc.).

Larsen reported that Matrix has availability by mid-July (week of July 18). Egan and Larsen had both heard rough estimates in the neighborhood of \$3,500-\$5,000/day. Larsen added that Matrix indicated a need to inject water with the HPT (approximately 8 gal/30 ft of boring); no one expressed any concerns about adding water, as long as it was from a clean source.

Discussion turned to how many holes would be needed, and how deep. Egan said he was thinking more in terms of days (at least 3) rather than holes. He added that the EPA lab guy thought that a good MIP operator would be able to identify lower and lower dissolved phase concentrations as work progressed, due to a better understanding of the site conditions. Saari thought the MIP/HPT investigation would take an iterative approach, selecting new locations and depths based on the information gathered.

Larsen reported that, per Matrix, the probe could be advanced approximately 1 ft/min, with a

maximum depth of 75-90 ft. The Matrix crew typically budgets ½-hr for set-up and ½-hr for equipment breakdown, working 9-hr days on average.

Egan said that he will include data post-processing in his next task order for the EPA contractor. He will also include the 2 new monitoring wells needed for the USGS study of groundwater/surface water interaction. In response to a question from Larsen, Egan indicated that the task order will cover well installations, development, surveying and the initial round of sampling of the well nests.

Saari asked if bidding for MIP/HPT work would be needed for PECFA purposes. Swimm said not necessarily; Saari will confirm this with WDNR management.

Larsen said that he would contact Matrix again, try to nail down schedule (assume 4 days plus one extra for contingency, week of July 18).

Larsen also indicated that changes made to the project calendar would be noted for all to see, and notes posted to it might include email notification to the project distribution list.

**Next Call: 8 AM, June 23, 2016**